

**NORTHERN CALIFORNIA EDUCATION AND RESEARCH CENTER FOR
OCCUPATIONAL SAFETY AND HEALTH**

NIOSH Training Grant T42-OH008429

**ANNUAL REPORT
July 1, 2011 – June 30, 2012**

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Northern California Education and Research Center Annual Report
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Section I:

ERC Summary:

The goal of the Northern California ERC, a consortium of programs of the University of California, is to train professionals as practitioner and research leaders in occupational safety and health by offering graduate degrees, residency training, clinical experiences, and research mentorship to trainees. The aim of the ERC is to provide a broad, multidisciplinary educational experience involving student and faculty collaborations in the classroom and on research and service projects. Activities are grounded in multi-campus, interactive teaching programs that translate knowledge into information that can be used to improve worker safety and health. In addition, through the Continuing Education Program and the Outreach components of the Labor Occupational Health Program, the ERC provides continuing education courses and outreach activities to other health professionals. The Center aims to provide an educational bridge from the University to external constituencies to ensure that practicing professionals, workers, their representatives, supervisors, and other educators benefit from the University's occupational health and safety expertise. The ERC strives to integrate an occupational safety and health perspective in all of its activities, including such activities as the STEER program, a summer internship program funded by the National Institute for Environmental Health Sciences, which is designed to encourage students to consider further study in one of the ERC programs.

The Northern California ERC trains professionals in the following areas:

Industrial Hygiene (UC Berkeley) – MPH, MS, PhD degrees

Occupational Epidemiology (UC Berkeley) - MS, PhD degrees

Ergonomics (joint program at UCB/UCSF) – MS/MPH, PhD degrees

Occupational and Environmental Health Nursing (UCSF) – MS, PhD degrees

Occupational and Environmental Medicine (UCSF) – Residency Training, MPH degrees

Targeted Research Training (joint program at UCB/UCSF)

Relevance:

The aim of the ERC training program is to produce graduates with strong problem solving skills and the ability to synthesize diverse information in order to effectively address both typical and unusual problems that arise in the technically, institutionally, and culturally complex workplaces which characterize the current economy. Issues facing low-wage and immigrant workers are particularly important to the ERC, as are health and safety issues in emerging sectors such as green jobs.

Key Personnel:

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ERC web link: <http://coeh.berkeley.edu/>

Section II:

Program highlights of high impact:

Occupational and Environmental Medicine (OEM) Program: *Director: Paul Blanc, MD, MSPH*
The OEM division is proud to announce in May 2012 the appointment of Gina Solomon, MD, MPH, OEM residency director, as deputy secretary for science and health at the California Environmental Protection Agency (Cal EPA), a newly created post by Governor Jerry Brown. She has been replaced by Paul Blanc, MD, MSPH, one of our key faculty in the Division of Occupational and Environmental Medicine at UCSF. Dr. Blanc's research includes a new focus on survival following lung transplantation for silicosis and other occupational lung diseases. Robert Harrison, MD, MPH, another key faculty member, has joined him as associate residency director and principal investigator for our Health Resources and Services Administration (HRSA) grant. Extending our funding from NIOSH, funding from HRSA supports the training of two additional OEM residents or fellows. The HRSA funding has allowed us to expand our work to include improved service to underserved and immigrant workers, and enhanced educational opportunities around workplace wellness.

Occupational and Environmental Health Nursing (OEHN) Program: *Director: Oisaeng Hong, RN, PhD*

Occupational and Environmental Health Nursing continues to be highly productive, enrolling 14 MS and 5 PhD students during this past academic year. Dana Drew Nord, a 2009 doctoral graduate of the program, has been recruited to the clinical faculty. Oisaeng Hong, OEHN program director, continues to be a leader in research concerning hearing loss in firefighters and smoking among building trades workers. Following up on the IOM report on nursing curriculum in respiratory protection, Barbara Burgel, OEHN clinical professor, took the lead on a nationwide survey assessing current OHN educational preparation, roles and responsibilities, and training needs in respiratory protection.

Industrial Hygiene (IH) Program: *Director: Mark Nicas, PhD, MPH, CIH*

Dr. Mark Nicas, current IH program director, will be succeeded by Dr. S. Katharine Hammond at the end of the 2012-13 academic year. They will work together this year to ensure a smooth transition. Dr. Hammond is an industrial hygienist with an international reputation. Her current research focuses on diesel exhaust, solvents, and exposure assessment of second hand tobacco smoke in the workplace. One of Dr. Hammond's previous projects involved auto mechanics' exposure to hexane in brake cleaning fluid causing peripheral neuropathy. This study led the state of CA to issue a warning and manufacturers discontinued the use of hexane in brake cleaning products. She is currently funded to examine persistent peripheral neuropathy, cognitive effects, and reproductive effects in auto mechanics in the San Francisco Bay Area.

Ergonomics Graduate Training Program: *Director: David Rempel, MD, MPH*

Dr. Rempel continues to be an international leader in innovative approaches to reduce musculoskeletal disorders with ergonomic design of tools, including overhead drilling tools, laboratory pipettes, and dental hygiene tools. He presented his findings from the overhead drilling project at the CPWR Construction Industry Technology Transfer Symposium held in May 2012. Dr. Rempel is also serving as a scientific advisor to the California Occupational Health and Safety Administration on the new Hospital Patient and Health Care Worker Injury Protection Act, AB1136, which took effect January 1, 2012.

Occupational Epidemiology Program: *Director: Ellen Eisen, PhD*

The Occupational Epidemiology program is in its second year of NIOSH funding and continues to be successful in attracting students at both Master's and PhD levels. A new course, "Case Studies in Occupational and Environmental Epidemiology", was offered to ERC students across all disciplines. Program Director Ellen Eisen successfully competed for NIOSH funding to study the effects of fine particulate matter exposure and the risk of COPD and cardiovascular mortality among autoworkers.

Continuing Education (CE) Program: *Director: Barbara Plog, MPH, CIH, CSP*

The CE Program trained 3,013 occupational safety and health professionals in 93 courses. The disciplines trained included 672 physicians, 248 nursing professionals, 726 industrial hygiene and 448 safety trainees; the number of "other" professionals was 930. The number of private industry professionals trained was 647. Attendees also came from federal government (167); state and local government (958); academia (1036); and internationally (14). Ms Plog created and administered a new series of classes for Cal/OSHA compliance officers and consultation staff. Classes were offered in 11 locations and included 302 H&S professionals throughout the state. The CE program also created a new training, "Preparedness for Respirator Use in Healthcare Facilities" to assist nurses in facilities in California to meet their respiratory protection requirements under the new Aerosol Transmissible Disease Standard. Finally, the CE Program launched a highly successful "Spring Health and Safety Webinar Series" in 2012, offering six webinars with a combined attendance of 290 attendees.

Outreach Activities: *Director: Michael Wilson, PhD*

New Labor Occupational Health Program Director, Dr. Michael Wilson, a PhD graduate of our industrial hygiene program, has been instrumental in developing the Berkeley Center for Green Chemistry, an interdisciplinary program focusing on green chemistry research, education and public engagement to address the growing problem of chemical pollution and exposures. In addition to his work on green chemistry, Dr. Wilson, under contract from Cal/OSHA, recently published an important paper assessing fire department responses to confined space emergencies.